Figure 1A

Muc1 Exemplary Protein – (SEQ ID NO:19)

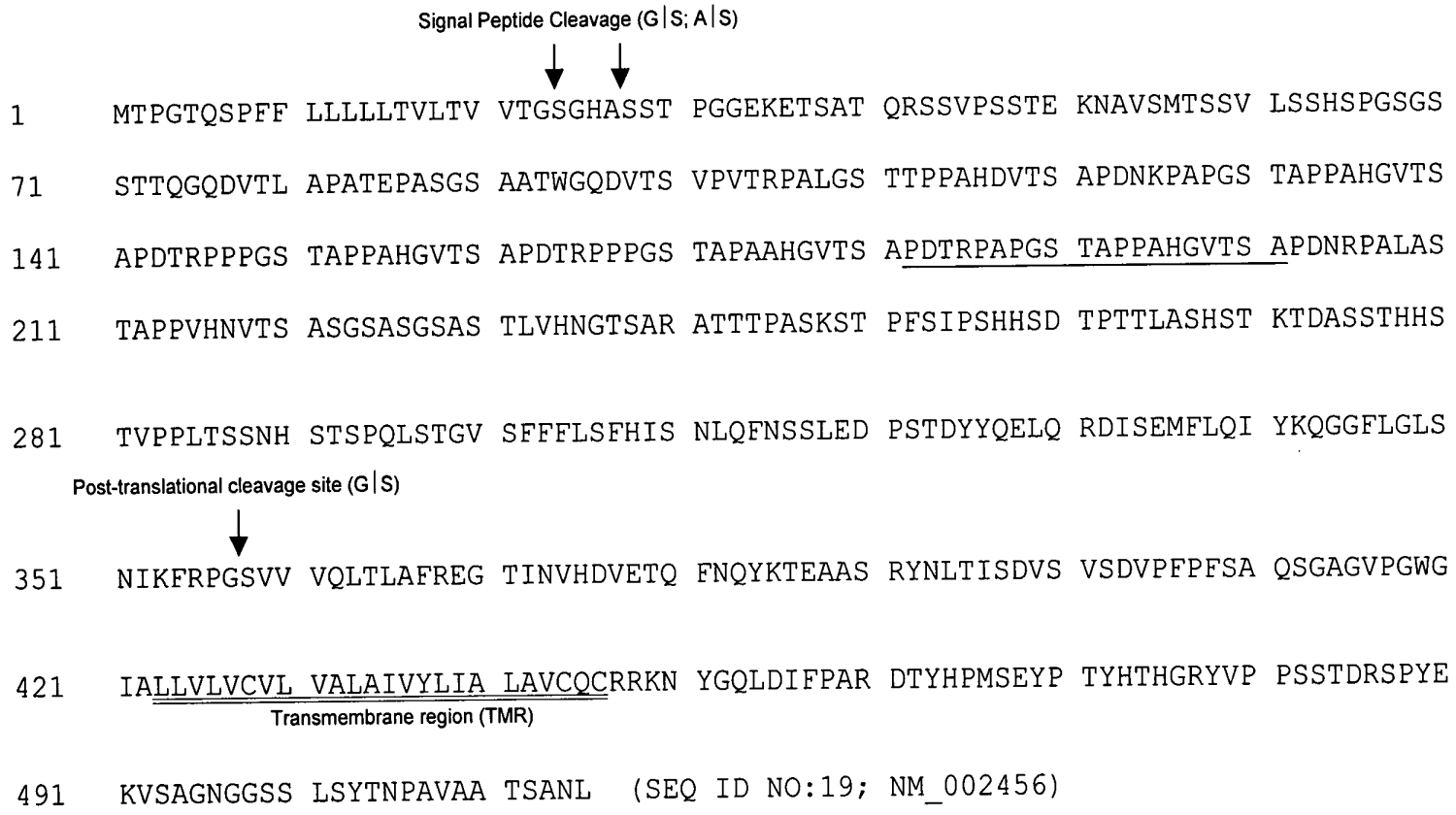


Figure 1B

Muc1 juxtamembrane domain-GST Fusion

GST plus amino acids 337-422 of Muc1

GST-FLQI YKQGGFLGLS NIKFRPGSVV VQLTLAFREG TINVHDVETQ FNQYKTEAAS RYNLTISDVS VSDVPFPFSA QSGAGVPGWG IA (SEQ ID NO:7)

Synthetic Peptides

Peptide a	21 amino acids	(362-382)	QLTLAFREGTINVHDVETQFN	(SEQ ID NO:8)
Peptide b	21 amino acids	(383-403)	QYKTEAASRYNLTISDVSVSD	(SEQ ID NO:9)
Peptide c	21 amino acids	(337-357)	FLQIYKQGGFLGLSNIKFRPG	(SEQ ID NO:10)
Peptide d	21 amino acids	(354-374)	FRPGSVVVQLTLAFREGTINV	(SEQ ID NO:11)
Peptide e	19 amino acids	(404-422)	VPFPFSAQSGAGVPGWGIA	(SEQ ID NO:12)

Figure 2A

Muc16 Exemplary Protein – (SEQ ID NO:20)

```
1       MEHITKIPNE AAHRGTIRPV KGPQTSTSPA SPKGLHTGGT KRMETTTTAL KTTTTALKTT SRATLTTSVY TPTLGTLTPL  AMINO
81      NASRQMASTI LTEMMITTPY VFPDVPETTS SLATSLGAET STALPRTTPS VLNRESETTA SLVSRSGAER SPVIQTLDVS  TERMINAL
161     SSEPDTTASW VIHPAETIPT VSKTTPNFFH SELDTVSSTA TSHGADVSSA IPTNISPSEL DALTPLVTIS GTDTSTTFPT  DOMAIN
241     LTKSPHETET RTTWLTHPAE TSSTIPRTIP NFSHHESDAT PSIATSPGAE TSSAIPIMTV SPGAEDLVTS QVTSSGTDRN
321     MTIPTLTLSP GEPKTIASLV THPEAQTSSA IPTSTISPAV SRLVTSMVTS LAAKTSTTNR ALTNSPGEPA TTVSLVTHPA
401     QTSPTVPWTT SIFFHSKSDT TPSMTTSHGA ESSSAVPTPT VSTEVPGVVT PLVTSSRAVI STTIPILTLS PGEPETTPSM
481     ATSHGEEASS AIPTPTVSPG VPGVVTSLVT SSRAVTSTTI PILTFSLGEP ETTPSMATSH GTEAGSAVPT VLPEVPGMVT
561     SLVASSRAVT STTLPTLTLS PGEPETTPSM ATSHGAEASS TVPTVSPEVP GVVTSLVTSS SGVNSTSIPT LILSPGELET
641     TPSMATSHGA EASSAVPTPT VSPGVSGVVT PLVTSSRAVT STTIPILTLS SSEPETTPSM ATSHGVEASS AVLTVSPEVP
721     GMVTSLVTSS RAVTSTTIPT LTISSDEPET TTSLVTHSEA KMISAIPTLA VSPTVQGLVT SLVTSSGSET SAFSNLTVAS
801     SQPETIDSWV AHPGTEASSV VPTLTVSTGE PFTNISLVTH PAESSSTLPR TTSRFSHSEL DTMPSTVTSP EAESSSAIST
881     TISPGIPGVL TSLVTSSGRD ISATFPTVPE SPHESEATAS WVTHPAVTST TVPRTTPNYS HSEPDTTPSI ATSPGAEATS
961     DFPTITVSPD VPDMVTSQVT SSGTDTSITI PTLTLSSGEP ETTTSFITYS ETHTSSAIPT LPVSPGASKM LTSLVISSGT
1041    DSTTTFPTLT ETPYEPETTA IQLIHPAETN TMVPKTTPKF SHSKSDTTLP VAITSPGPEA SSAVSTTTIS PDMSDLVTSL
1121    VPSSGTDTST TFPTLSETPY EPETTVTWLT HPAETSTTVS GTIPNFSHRG SDTAPSMVTS PGVDTRSGVP TTTIPPSIPG
1201    VVTSQVTSSA TDTSTAIPTL TPSPGEPETT ASSATHPGTQ TGFTVPIRTV PSSEPDTMAS WVTHPPQTST PVSRTTSSFS
1281    HSSPDATPVM ATSPRTEASS AVLTTISPGA PEMVTSQITS SGAATSTTVP TLTHSPGMPE TTALLSTHPR TGTSKTFPAS
1361    TVFPQVSETT ASLTIRPGAE TSTALPTQTT SSLFTLLVTG TSRVDLSPTA SPGVSAKTAP LSTHPGTETS TMIPTSTLSL
1441    GLLETTGLLA TSSSAETSTS TLTLTVSPAV SGLSSASITT DKPQTVTSWN TETSPSVTSV GPPEFSRTVT GTTMTLIPSE
1521    MPTPPKTSHG EGVSPTTILR TTMVEATNLA TTGSSPTVAK TTTTFNTLAG SLFTPLTTPG MSTLASESVT SRTSYNHRSW
1601    ISTTSSYNRR YWTPATSTPV TSTFSPGIST SSIPSSTA

                                                AT VPFMVPFTLN FTITNLQYEE DMRHPGSRKF NATERELQGL
1681    LKPLFRNSSL EYLYSGCRLA SLRPEKDSSA MAVDAICTHR PDPEDLGLDR ERLYWELSNL TNGIQELGPY TLDRNSLYVN  TANDEM
1761    GFTHRSSMPT TSTPGTSTVD VGTSGTPSSS PSPTAAGPLL MPFTLNFTIT NLQYEEDMRR TGSRKFNTME SVLQGLLKPL  REPEAT
1841    FKNTSVGPLY SGCRLTLLRP EKDGAATGVD AICTHRLDPK SPGLNREQLY WELSKLTNDI EELGPYTLDR NSLYVNGFTH  DOMAIN
1921    QSSVSTTSTP GTSTVDLRTS GTPSSLSSPT/-/

              IT LLRDIQDKVT TLYKGSQLHD TFRFCLVTNL TMDSVLVTVK ALFSSNLDPS LVEQVFLDKT LNASFHWLGS  CARBOXY
11511   TYQLVDIHVT EMESSVYQPT SSSSTQHFYP NFTITNLPYS QDKAQPGTTN YQRNKRNIED ALNQLFRNSS IKSYFSDCQV  TERMINAL
11591   STFRSVPNRH HTGVDSLCNF SPLARRVDRV AIYEEFLRMT RNGTQLQNFT LDRSSVLVDG YSPNRNEPLT GNSDLPFWAV  DOMAIN
11671   ILIGLAGLLG LITCLICGVL VTTRRRKKEG EYNVQQQCPG YYQSHLDLED LQ
```

Figure 2B

Muc16 juxtamembrane domain-GST Fusion

GST plus amino acids 11559-11666 of Muc16

GST-TN YQRNKRNIED ALNQLFRNSS IKSYFSDCQV STFRSVPNRH HTGVDSLCNF SPLARRVDRV AIYEEFLRMT
RNGTQLQNFT LDRSSVLVDG YSPNRNEPLT GNSDLP (SEQ ID NO:13)

Synthetic Peptides

Peptide a	20 amino acids	(11644-11663)	SSVLVDG YSPNRNEPLT GNS	(SEQ ID NO:14)
Peptide b	20 amino acids	(11559-11578)	TN YQRNKRNIED ALNQLFRN	(SEQ ID NO:15)
Peptide c	21 amino acids	(11576-11596)	FRNSS IKSYFSDCQV STFRSV	(SEQ ID NO:16)
Peptide d	23 amino acids	(11595-11617)	SVPNRH HTGVDSLCNF SPLARRV	(SEQ ID NO:17)
Peptide e	28 amino acids	(11618-11645)	DRV AIYEEFLRMT RNGTQLQNFT LDRSS	(SEQ ID NO:18)

Figure 3

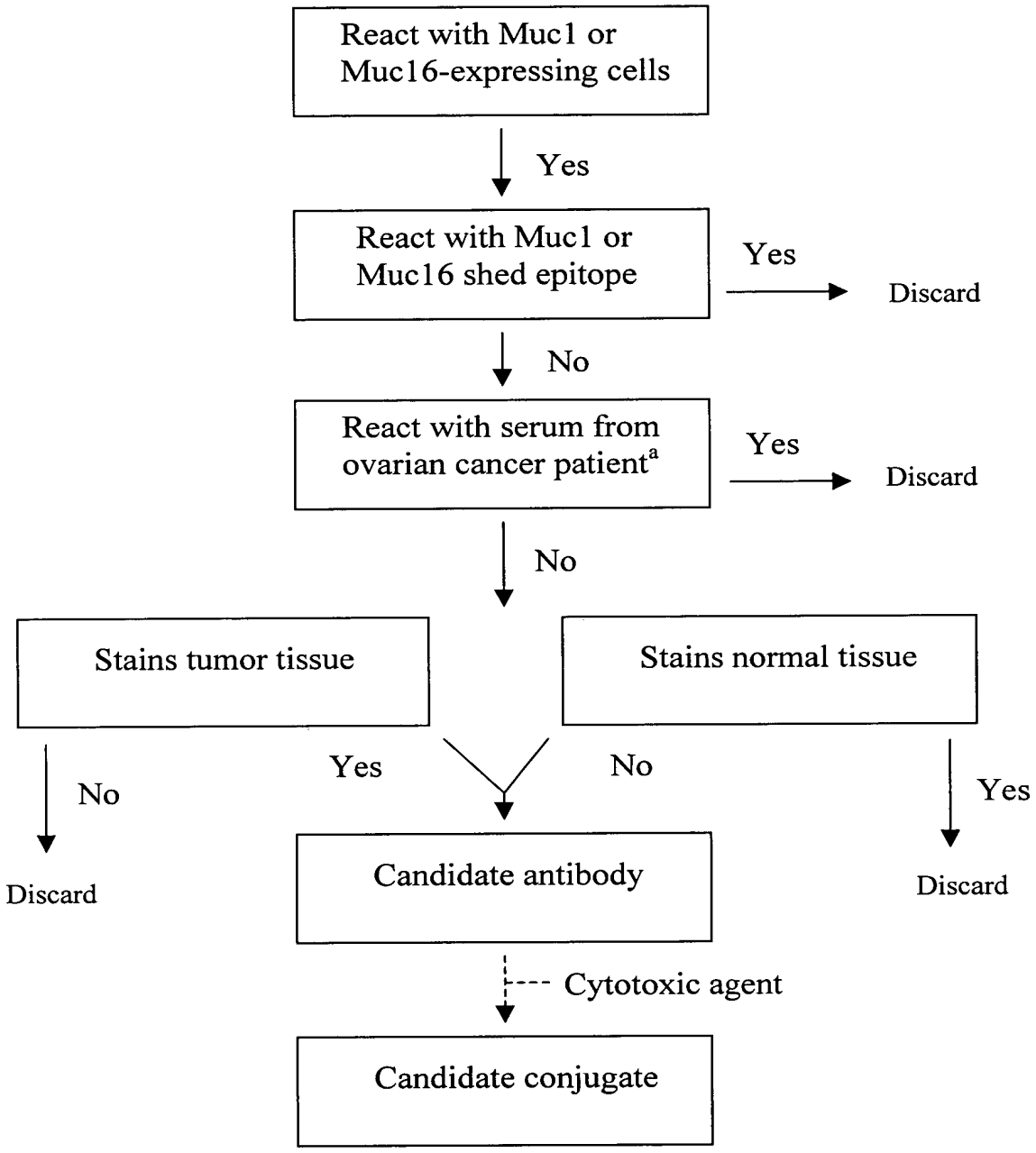
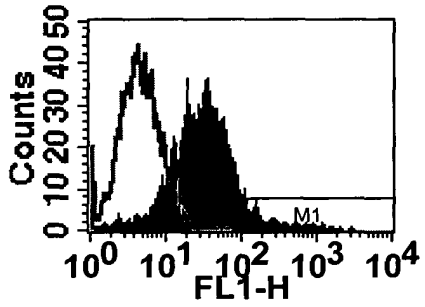
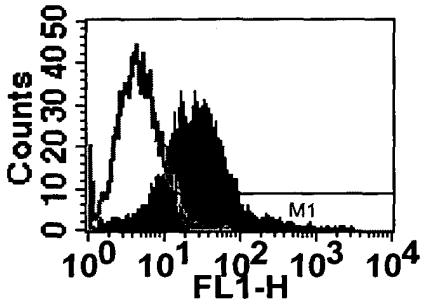

React with Muc1 or Muc16-expressing cells
Yes
React with Muc1 or Muc16 shed epitope
Yes
Discard
No
React with serum from ovarian cancer patient[a]
Yes
Discard
No
Stains tumor tissue
Stains normal tissue
No
Yes
No
Yes
Discard
Discard
Candidate antibody
Cytotoxic agent
Candidate conjugate

Figure 4A

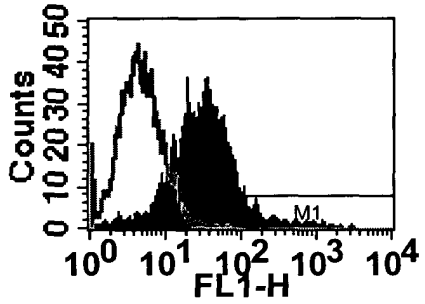
Clone 2C12



Clone 10B7



Clone 4H2



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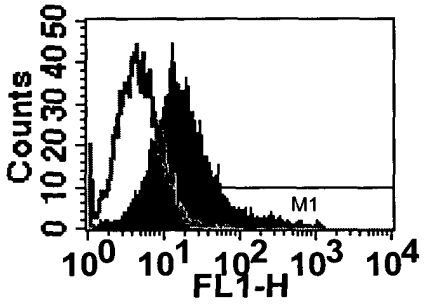

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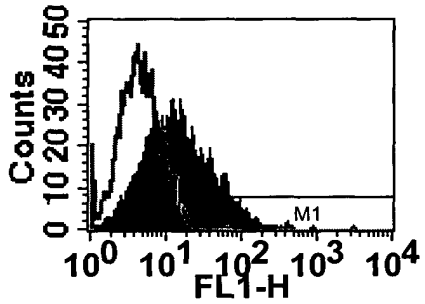


Clone 8H1

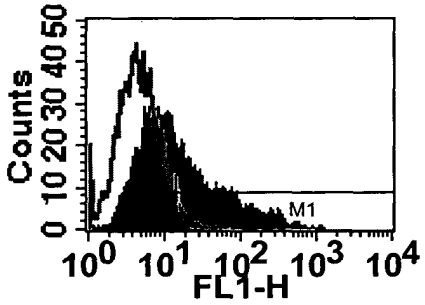
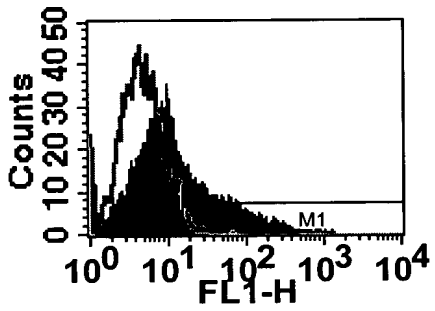
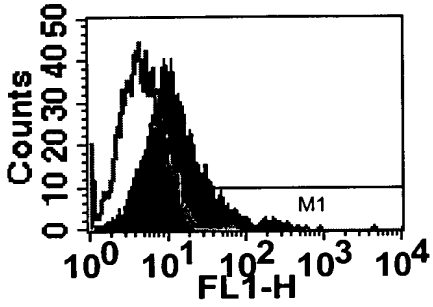


Figure 4A (continued)

Clone 6A4



Clone 7C10



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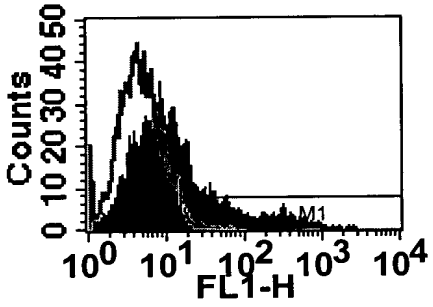

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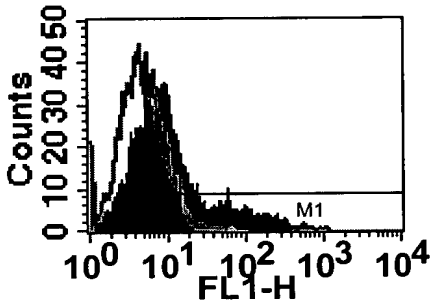
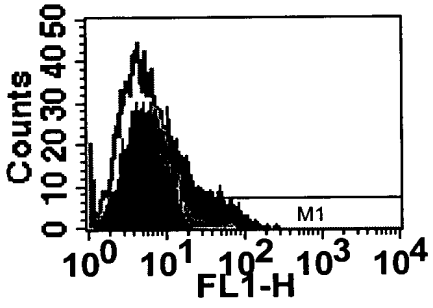


Clone 3A3



Clone 5C11

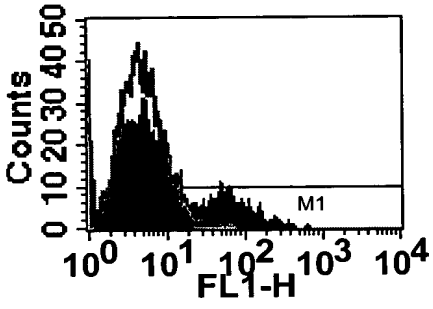


Figure 4B

CM1 (5.36×10^{-8}M)

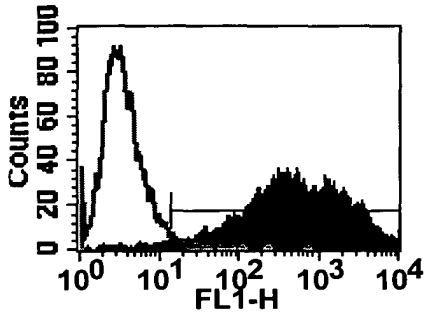
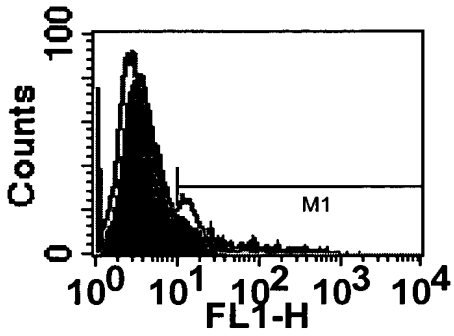
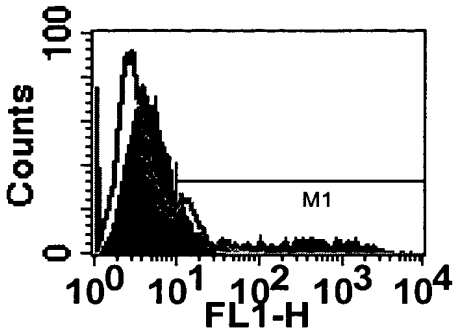


Figure 5A

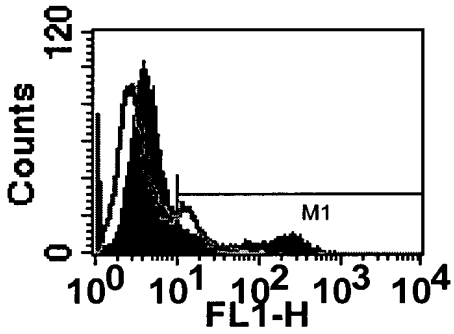
Clone 1B8



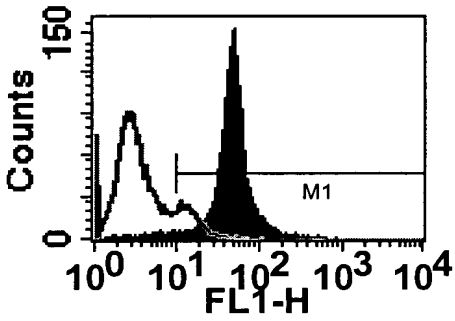
Clone 1D2



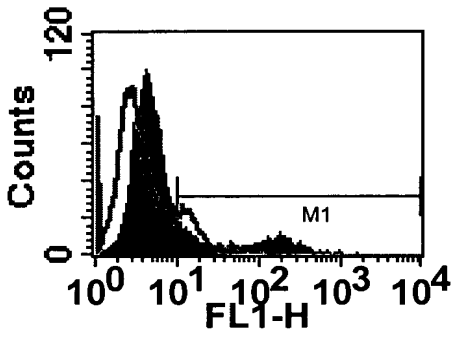
Clone 2F4



Clone 3B9



Clone 4E2



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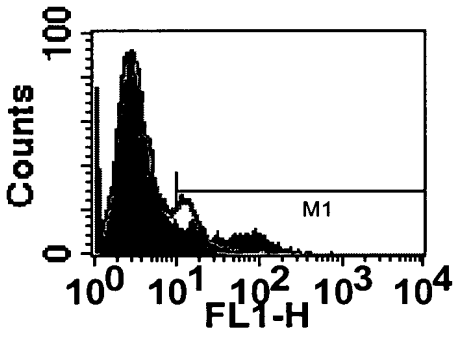

Figure 5A (continued)

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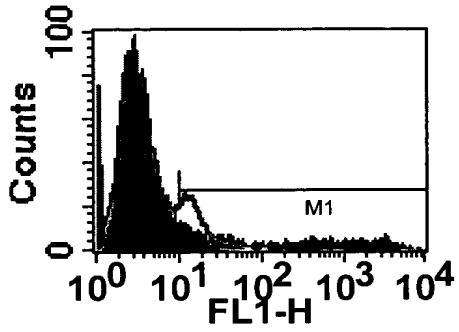

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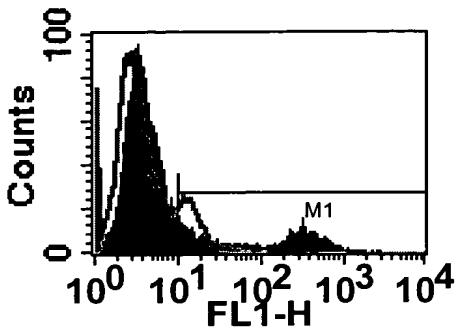

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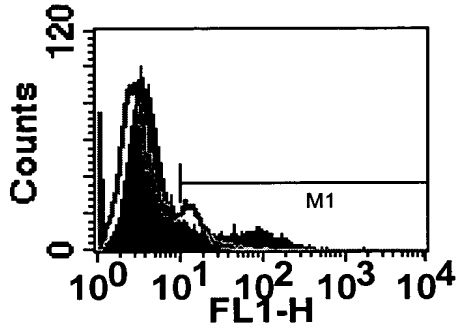

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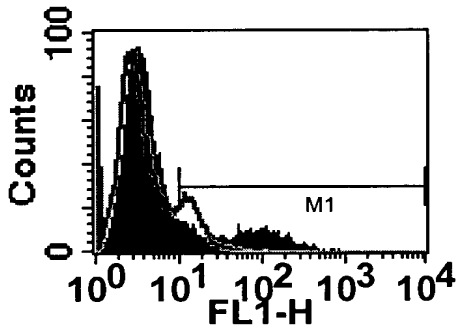

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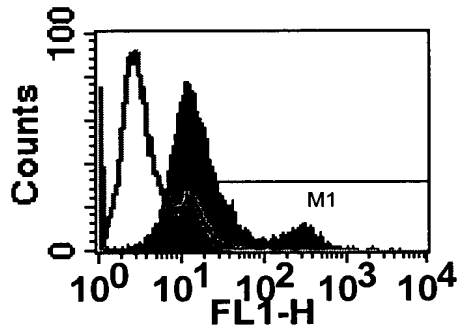

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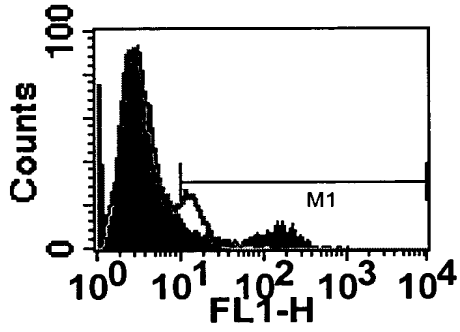

Figure 5A (continued)

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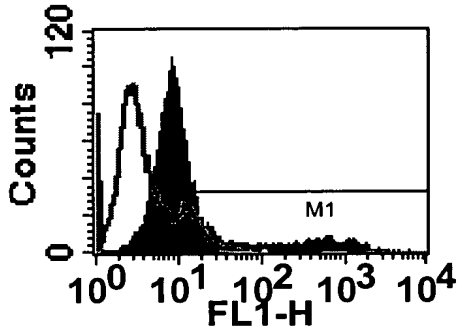

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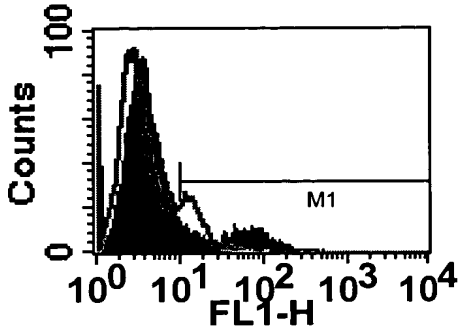

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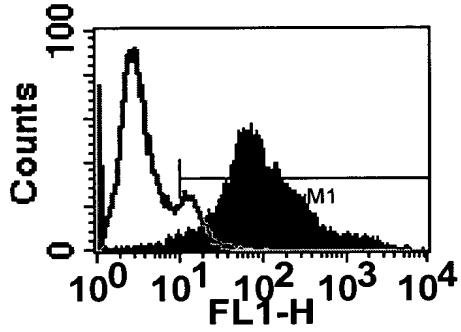

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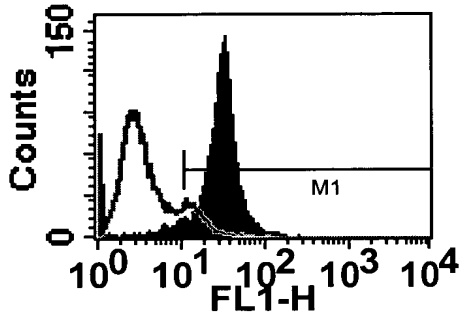

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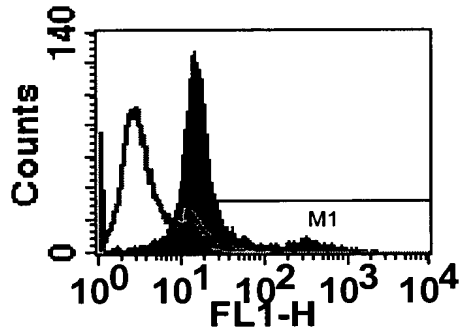


Clone 5C5

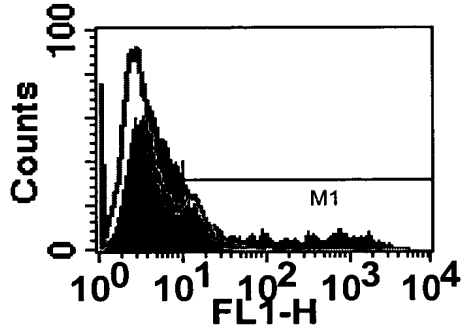
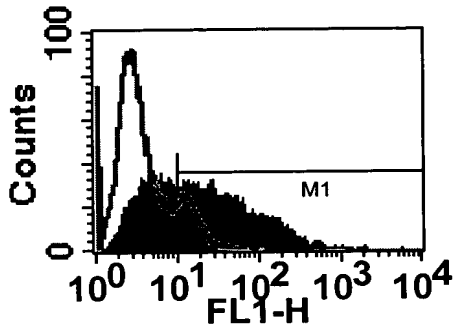
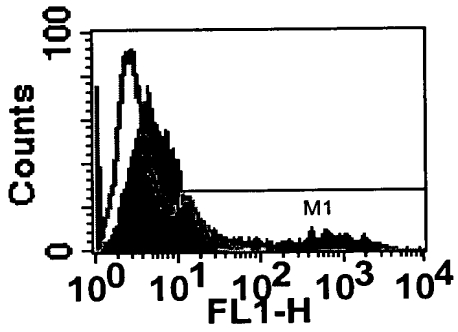


Figure 5A (continued)

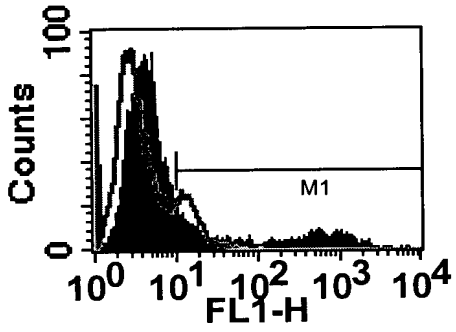
Clone 5E11



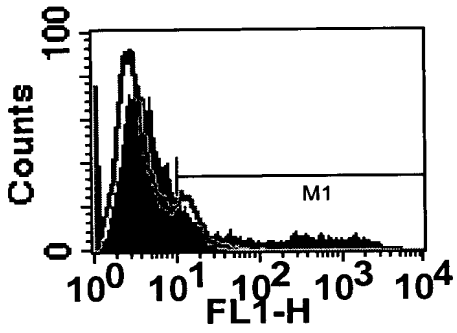
Clone 7G7



Clone 9D8



Clone 10C9



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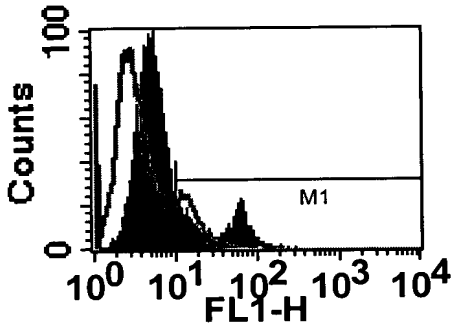

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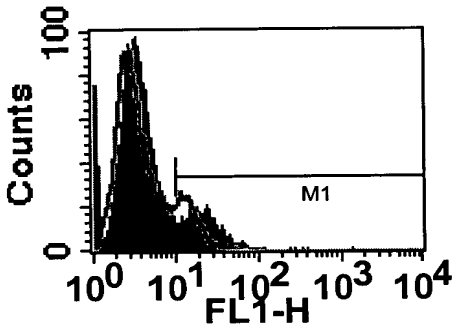

Figure 5B

M11

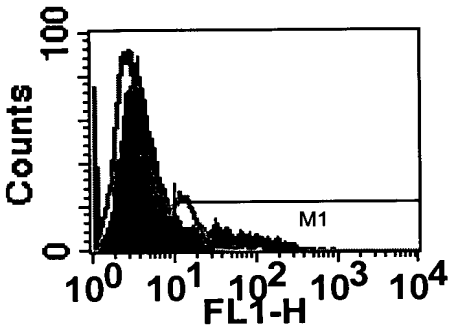

Figure 6A

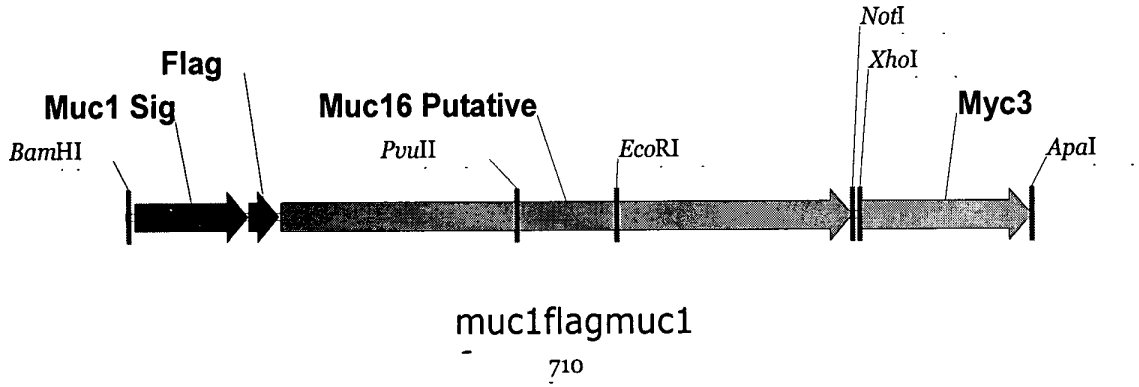

Figure 6B (SEQ ID NO:21)

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                     XbaI
                     ~~~~~~
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          GCTACTGTTC AGATCTAAGG CTTTGTCGTC GTAGTTCTCA ATAAAAAGAC TGACAGTTCA AAGTTGTAAG TCCAGACAGG GGTTGTCCGT GGTGTGGCCC CACCTGAGGG
                                                                                        KpnI
                                                                                        ~~~~~~~
 221      TGTGTAACTT CTCGCCACTG GCTCGGAGAG TAGACAGAGT TGCCATCTAT GAGGAATTTC TGCGGATGAC CCGGAATGGT ACCCAGCTGC AGAACTTCAC CCTGGACAGG
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                                                              EcoRI
                                                              ~~~~~~
 331      AGCAGTGTCC TTGTGGATGG GTATTCTCCC AACAGAAATG AGCCCTTAAC TGGGAATTCT GACCTTCCCT TCTGGGCTGT CATCCTCATC GGCTTGGCAG GACTCCTGGG
          TCGTCACAGG AACACCTACC CATAAGAGGG TTGTCTTTAC TCGGGAATTG ACCCTTAAGA CTGGAAGGGA AGACCCGACA GTAGGAGTAG CCGAACCGTC CTGAGGACCC

 441      ACTCATCACA TGCCTGATCT GCGGTGTCCT GGTGACCACC CGCCGGCGGA AGAAGGAAGG AGAATACAAC GTCCAGCAAC AGTGCCCAGG CTACTACCAG TCACACCTAG
          TGAGTAGTGT ACGGACTAGA CGCCACAGGA CCACTGGTGG GCGGCCGCCT TCTTCCTTCC TCTTATGTTG CAGGTCGTTG TCACGGGTCC GATGATGGTC AGTGTGGATC
                                  XhoI
                        NotI  ~~~~~~~
                     ~~~~~~~~~
 551      ACCTGGAGGA TCTGCAAGCG GCCGCTCGAG CCACCATGGA ACAAAAACTC ATCTCAGAAG AGGATCTGGC TAGCGAACAA AAACTCATCT CAGAAGAGGA TCTGGAACAA
          TGGACCTCCT AGACGTTCGC CGGCGAGCTC GGTGGTACCT TGTTTTTGAG TAGAGTCTTC TCCTAGACCG ATCGCTTGTT TTTGAGTAGA GTCTTCTCCT AGACCTTGTT
                                             XbaI
                                          ~~~~~~~  ApaI
                                                   ~~~~~~
 661      AAACTCATCT CAGAAGAGGA TCTGACCGGT TAAATGCATC TAGAGGGCCC
          TTTGAGTAGA GTCTTCTCCT AGACTGGCCA ATTTACGTAG ATCTCCCGGG
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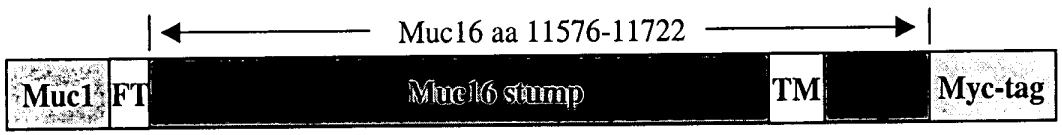
Figure 7



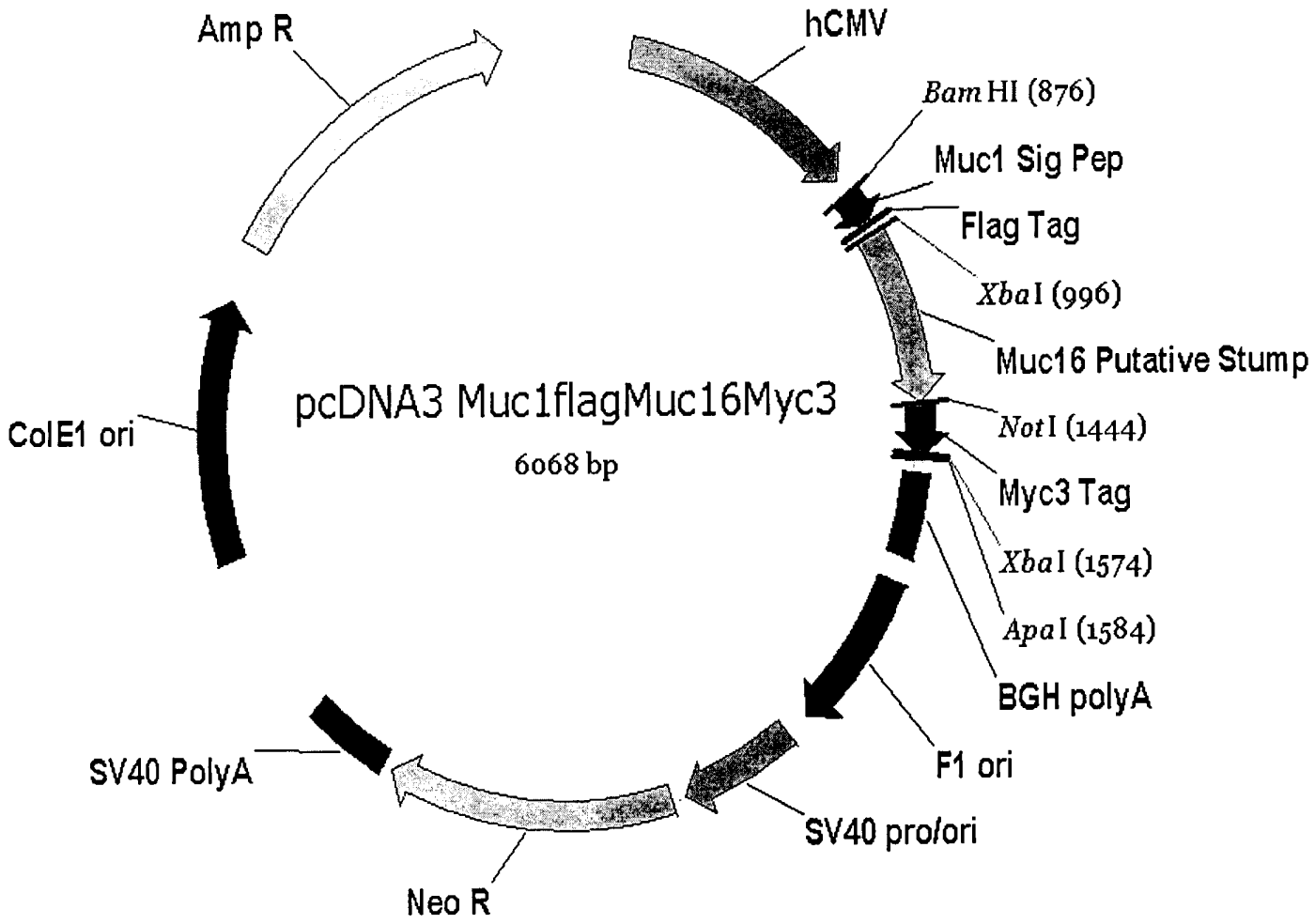


Figure 8

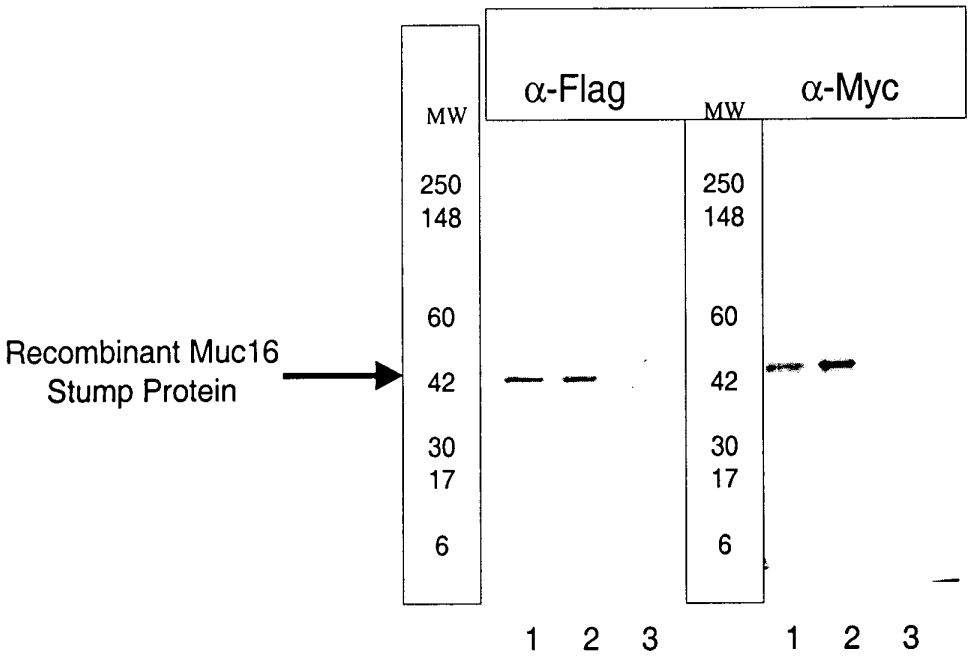


Figure 9

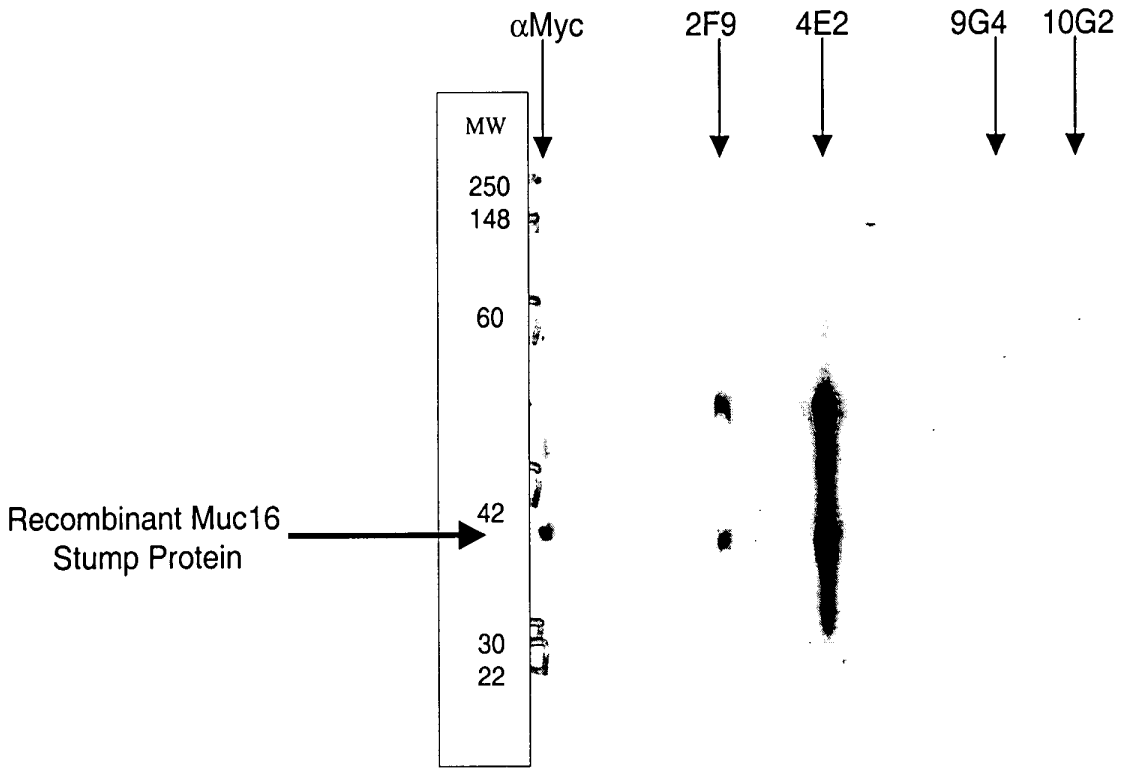


Figure 10A

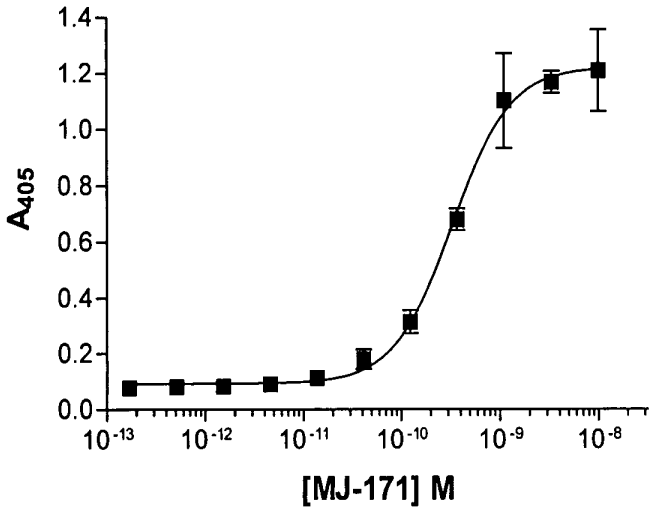


Figure 10B

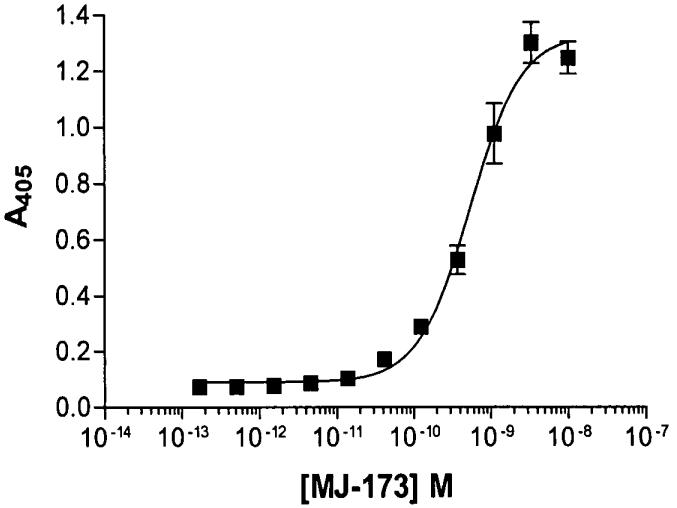


Figure 10C

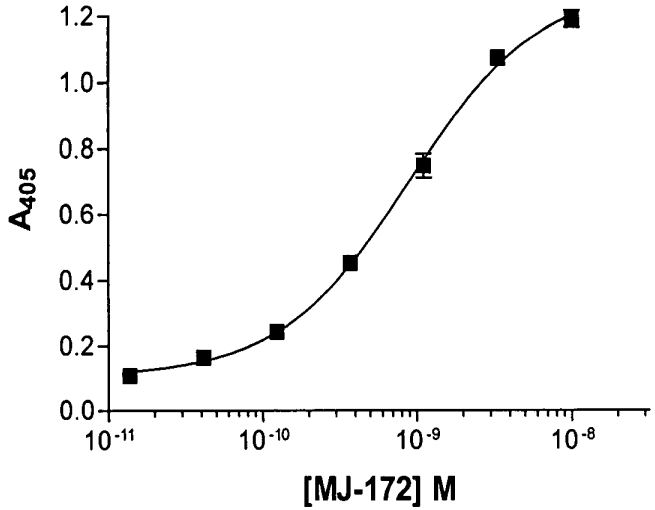


Figure 11

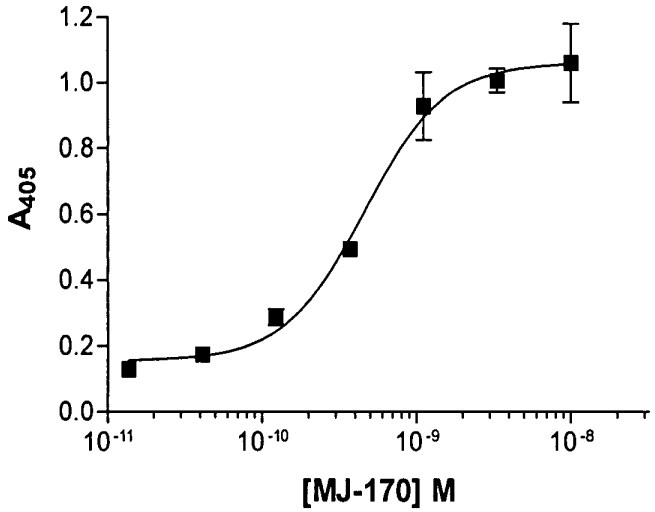


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Figure 12A

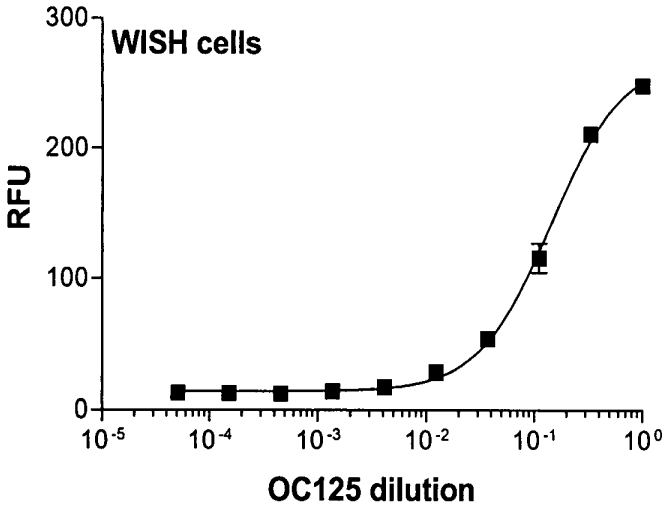

Figure 12B

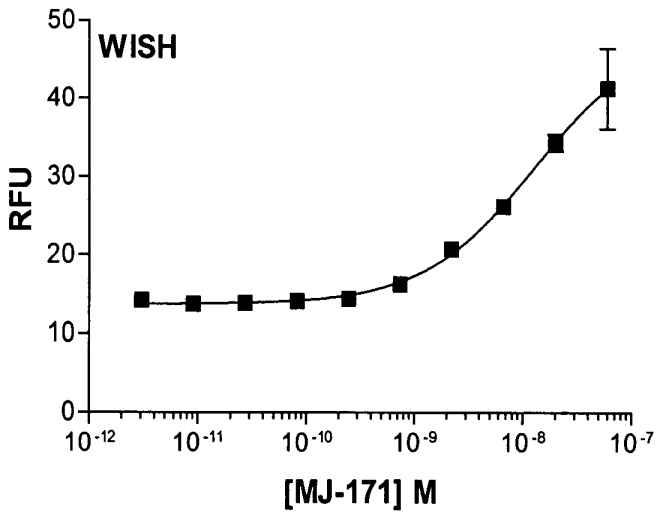

Figure 12C

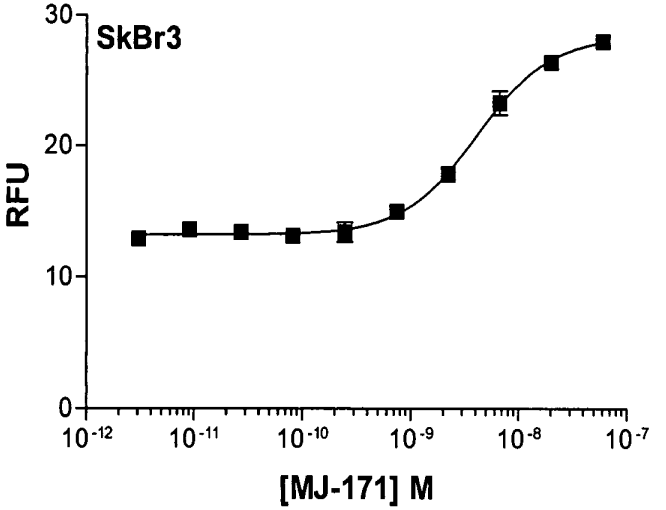

Figure 12D

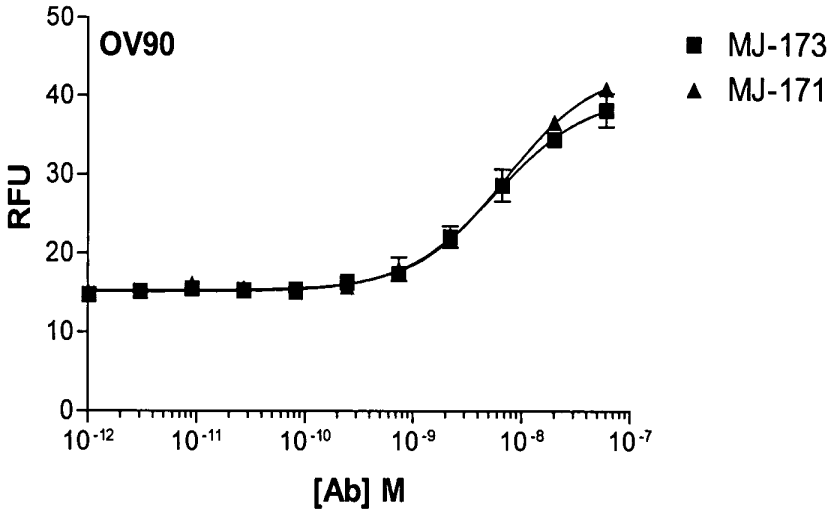

Figure 12E

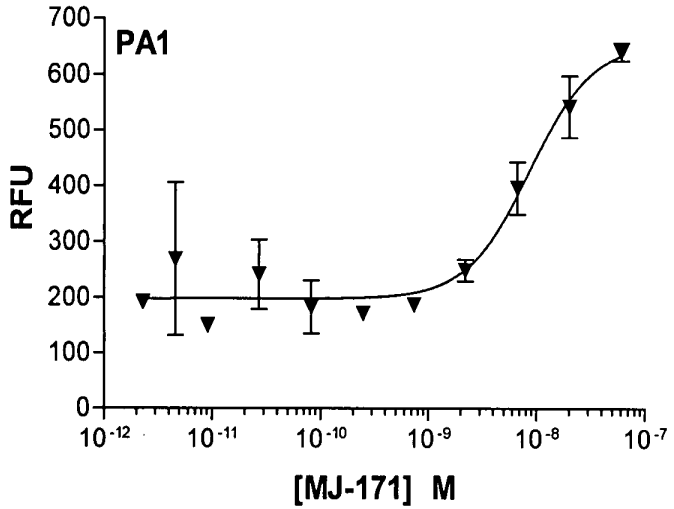

Figure 12F

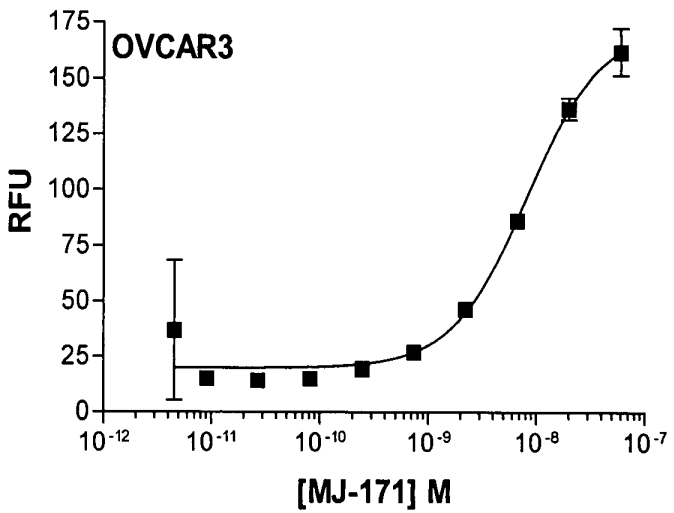

Figure 12G

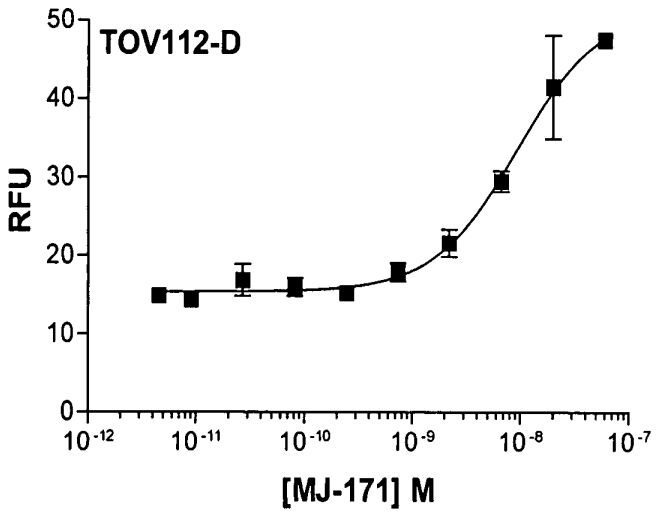

Figure 13A

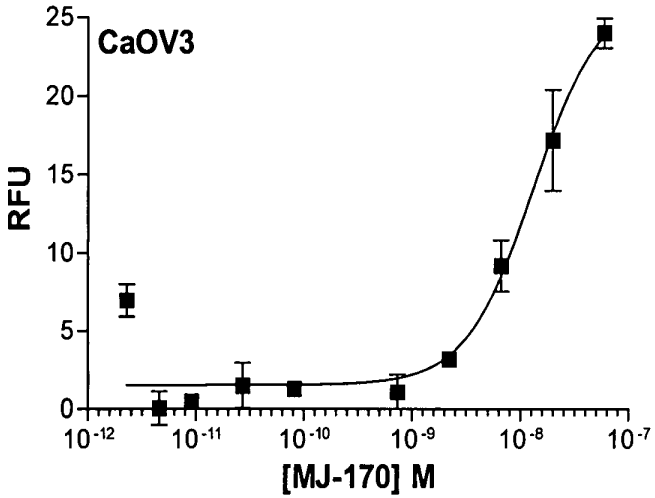

Figure 13B

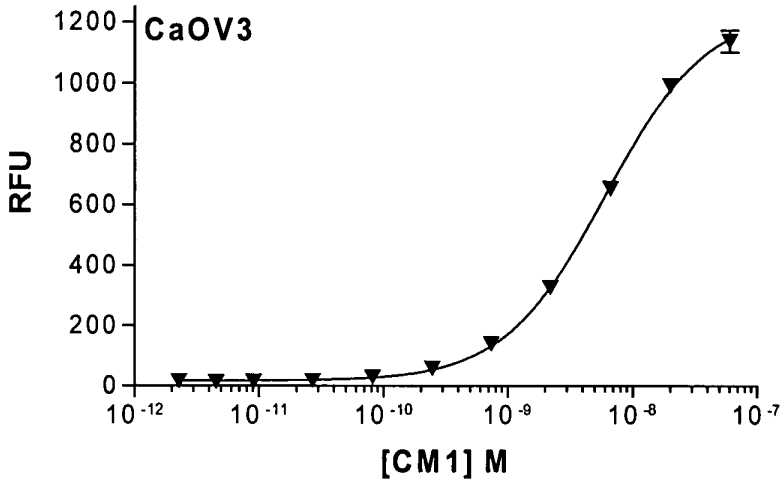

Figure 14A

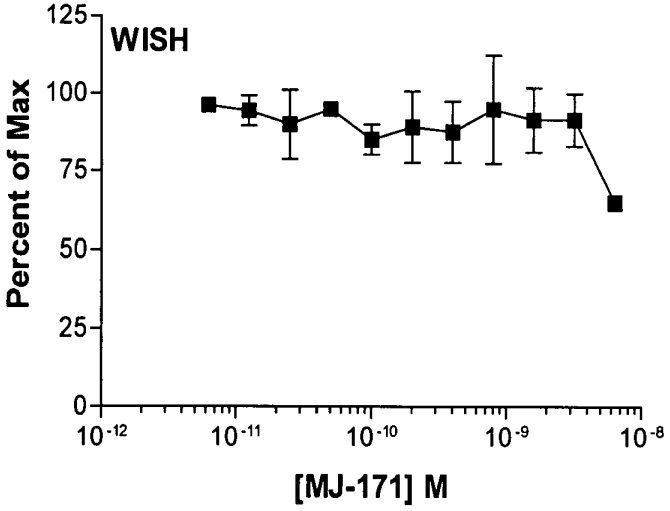

Figure 14B

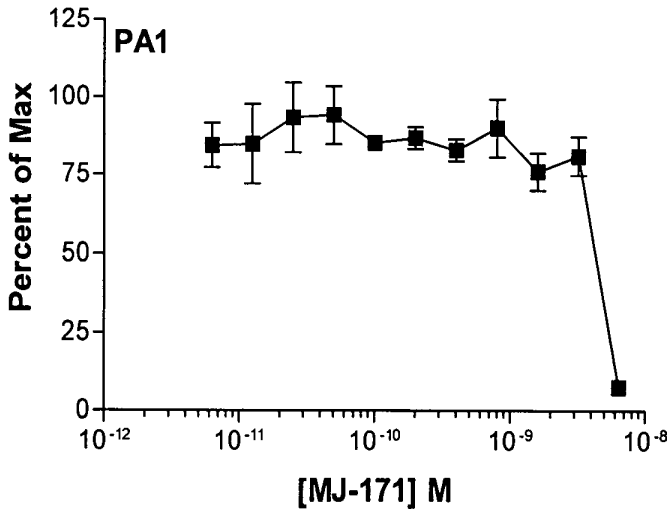

Figure 14C

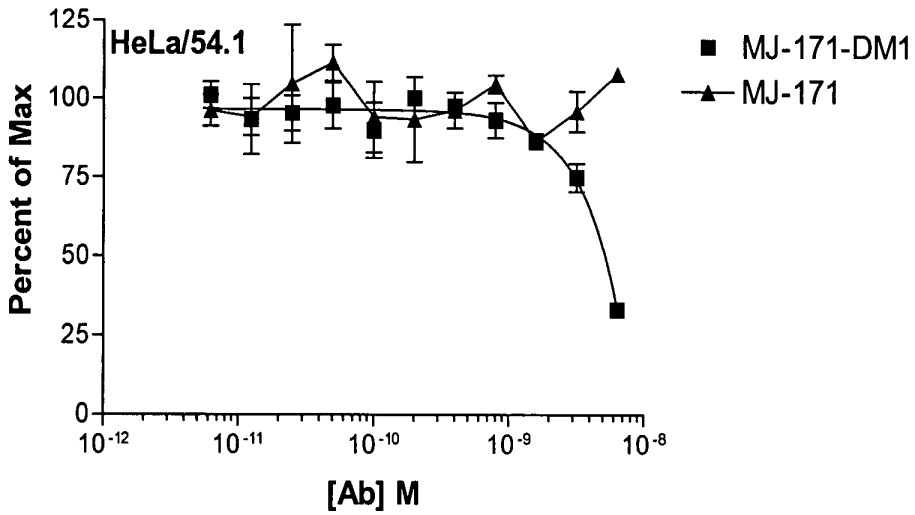

Figure 15

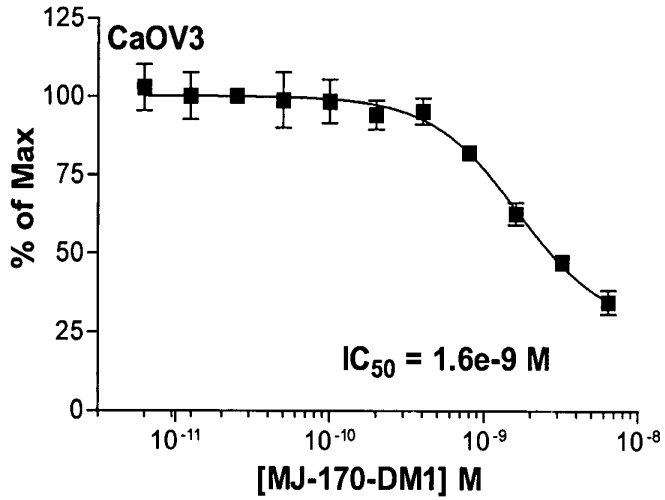
CaOV3
% of Max
125
100
75
50
25
0
10^{-11}
10^{-10}
10^{-9}
10^{-8}
IC_{50} = 1.6e-9 M
[MJ-170-DM1] M

Figure 16

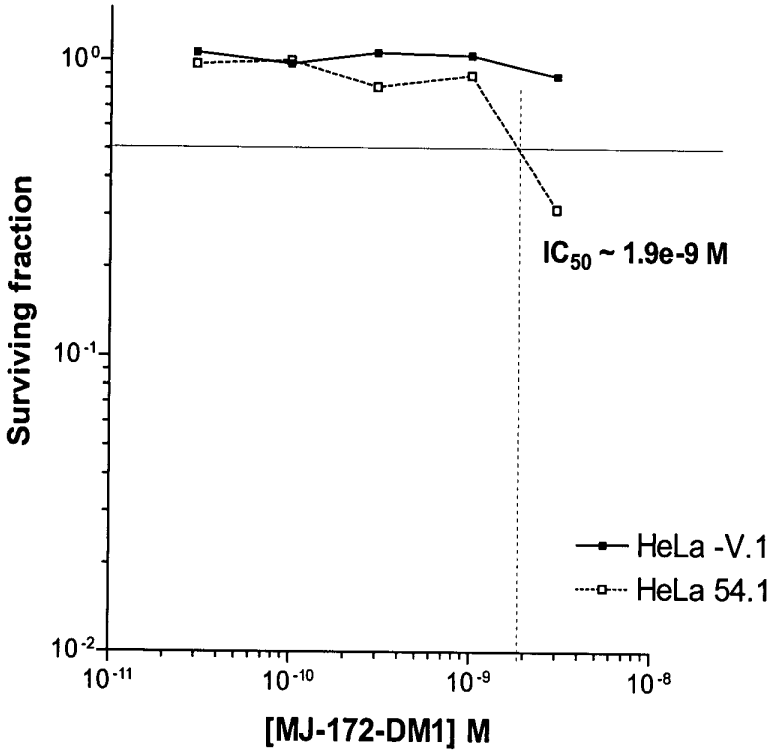

Figure 17